

Work Order ID 124984

124984

Page 1

Tuesday, September 30, 2014 1:30:20 PM

Item ID: D4635-3 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Aft Ceiling Panel, LH
Start Date: 9/30/2014 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 10/10/2014 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: MLS Date: 14-09-30 Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____
Run Start ***NR1***
Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D4635	E								

100 0.00
100 HAND FINISHING THERMOFORMING DAS
Thermoform Memo 0.00 27
Thermoforming Machine Cut Blanks 9-30
M/10/2

105 0.00
105 Dry Material DAS
HandThermo Memo 0.00 27
Hand Finishing Thermoforming Dry Sheet as per QSI022 POLYCARBONATE 9-30
Temp: 245 deg OCT 01 2014
Time IN: 5:00 PM Per.....
Time OUT: 6:00 AM

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Crosstube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐
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Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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Page 2

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Start Date: 9/30/2014 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 10/10/2014 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty DAS 27 9-89	Reject Qty	Reject Number	Insp. Stamp
110 *110* Thermoform Thermoforming Machine	THERMOFORMING MACHINE Memo Thermoform as per Dwg. D4635-3 and Folio FTA149 Dwg. Rev. <u>E</u> Folio Rev. <u>10</u> NOTE: Check moulds prior to using to ensure proper placement of add-ons. Visually inspect for proper formation and texture	0.00 0.00				<u>14/10/12</u>			
130 *130* Thermoform Thermoforming Machine	HAND FINISHING THERMOFORMING Memo Trim to Finished Dimensions	0.00 0.00				<u>1</u>			<u>B14/10/30</u>

DQA: _____ Date: _____



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Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Crosstube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐
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Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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Page 3

Tuesday, September 30, 2014 1:30:20 PM

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Item Name: Aft Ceiling Panel, LH
Start Date: 9/30/2014 Start Qty: 1.00 ***1*** Cust Item ID:
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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140	QC6- Inspect dimensions to drawing Dimensional Inspection	0.00				<i>Sh</i>	<i>11/12</i>		
140									
QC	Memo	0.00							
Quality Control	Fill out Inspection Sheet Rev A								DAS 38 APR 28 2015
<i>141</i>	<i>QC5 Inspection</i>								
160	Packaging	0.00							
160									
Packaging	Memo	0.00							DAS 9-89 APR 28 2015
Packaging									
170	QC21- Final Inspection - Work Order Release	0.00							
170									
QC	Memo	0.00							
Quality Control									MAY 07 2015 MLC

MLC MAY 07 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td style="width: 33%;"> Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ </td> <td style="width: 33%;"> Crosstube ☐ Small Fab ☐ Finishing ☐ Composite ☐ </td> <td style="width: 33%;"> Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ </td> <td style="width: 33%;"> Engineering ☐ Quality ☐ Other ☐ </td> </tr> </table>	Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐	Crosstube ☐ Small Fab ☐ Finishing ☐ Composite ☐	Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐	Engineering ☐ Quality ☐ Other ☐
Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐	Crosstube ☐ Small Fab ☐ Finishing ☐ Composite ☐	Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐	Engineering ☐ Quality ☐ Other ☐			

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Picklist Print

Tuesday, September 30, 2014 1:30:23 PM

Page 1

Work Order ID: 124984

124984

Parent Item: D4635-3

D4635-3

Parent Item Name: Aft Ceiling Panel, LH

Start Date: 9/30/2014

Required Date: 10/10/2014

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev. A New Issue 12/05/07 DL VERIFIED BY:JLM IPP Rev. B
Dwg. Update 12/11/08 DL IPP Rev C Dwg. Update
13/07/09 DL IPP Rev. D Dwg. Update, Material
Change 13/12/18 DL IPP Rev. E Dwg. Update 14/01/09 DL

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MLEXS.093-F6006-07		Purchased		No		100	sf	3,338.313	9.39	10			

MI FXS 093-F6006-07

GE PLASTICS LEXAN SHEET (Grey)

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
MAT023	3338.31332	
114459	229.26	
123105	38	
124501	543.5	
m128668	181.35	
m129014	102.33332	
m129471	21.92	
m129738	2221.95	

DAS
27

p-89

14/10/12

10

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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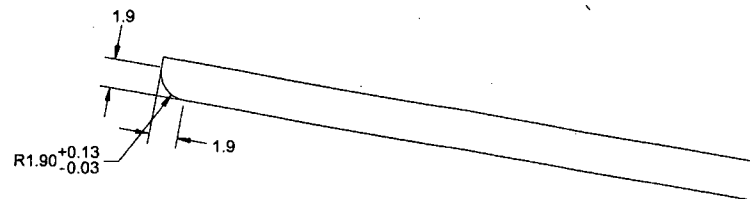
DART AEROSPACE LTD		Work Order:	124984
Description: LH Aft Ceiling Panel		Part Number:	D4635-3
Inspection Dwg: D4635 Rev: E		Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

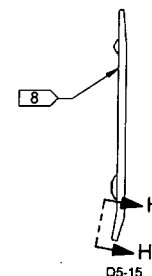
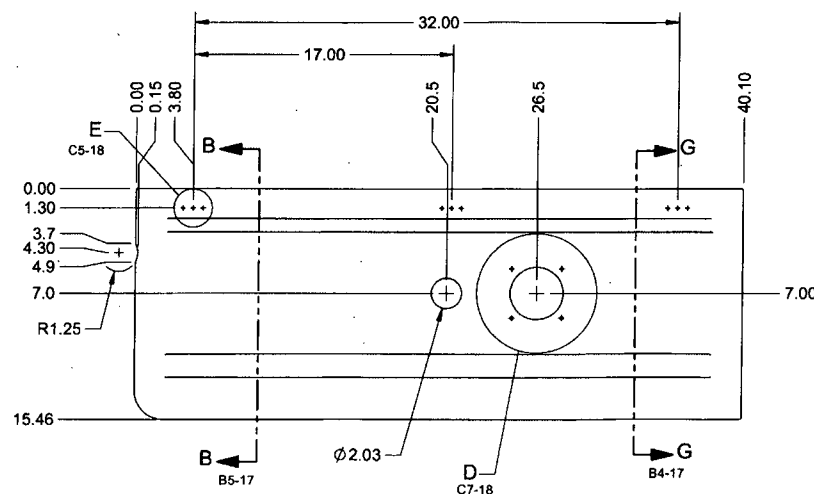
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
3.80	+/-0.030	3.80	✓		TH 01	
17.00	+/-0.030	17.00	✓		ENC 7-09	
32.00	+/-0.030	32.00	✓			
20.5	+/-0.100	20.5	✓			
26.5	+/-0.100	26.5	✓			
7.0	+/-0.100	7.0	✓			
7.0	+/-0.100	7.0	✓			
Ø2.03	+0.012/-0.001	2.041	✓			
3.300	+/-0.010	3.3011	✓			
1.650	+/-0.010	1.6501	✓			
3.300	+/-0.010	3.3007	✓			
1.650	+/-0.010	1.6503	✓			
Ø0.191	+0.005/-0.001	0.193	✓			
1.300	+/-0.010	1.3003	✓			
0.650	+/-0.010	0.6499	✓			
Ø0.129	+0.005/-0.001	0.1285	✓			
0.50	+/-0.030	0.528	✓			
0.30	+/-0.030	0.32	✓			
0.35 - 0.40	+/-0.030	0.391	✓			

Measured by:	SPH	Audited by:	38	Preliminary Approval:	
Date:	14/11/16	Date:	14/11/16	Date:	

Rev	Date	Change	Revised by	Approved
A	14.07.29	New Issue	KJ	



SECTION H-H B2-15



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 124984 MLW
1409-30

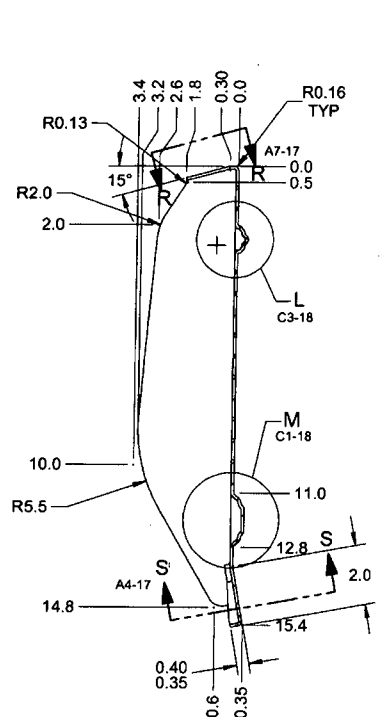
NOTES:

- 1) MATERIAL: F6006 SUEDE/POLISHED GY5B133 LIGHT GREY LEXAN SHEET 0.093 THICK
(REF DART SPEC MLEXS.093-F6006-07)
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 2.66 lbs
- 8) TEXTURE ON THIS SIDE
- 9) TRIM D4635-3 PER TOOL DT9841
- 10) THERMOFORM D4635-3 PER QSI 022 USING DT9849 TOOL
MIN. THICKNESS AFTER FORMING:
RIDGES/EDGES = 0.060
ELSEWHERE = 0.070

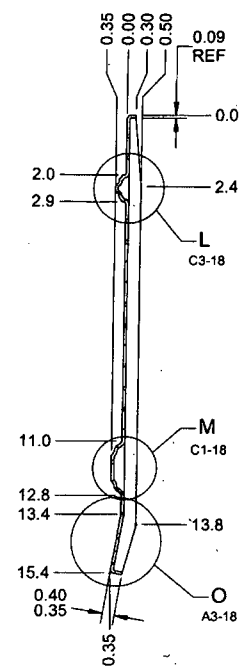
D4635-3 LH, AFT CEILING PANEL

RELEASED
2014-01-22
W

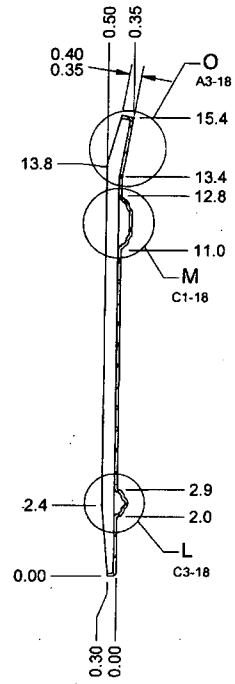
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DRAWN	RF		
CHECKED	PC	DRAWING NO.	REV. E
MFG. APPR.	PC	D4635	SHEET 15 OF 18
APPROVED	PC	TITLE	SCALE
DE APPR.	PC	OUTBOARD CEILING PANELS	NTS
DATE	14.01.09	COPYRIGHT © 2012 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	



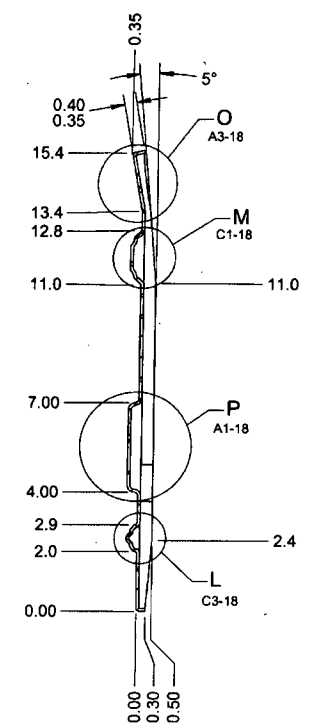
SECTION A-A
SECTION A-A' OPPOSITE
 SCALE 2X



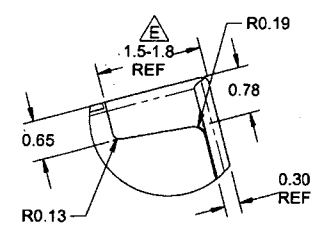
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 SCALE 2X



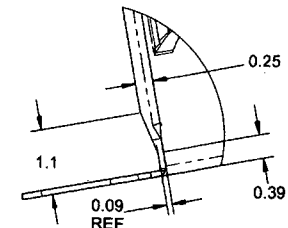
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SECTION K-K
 SCALE 2X



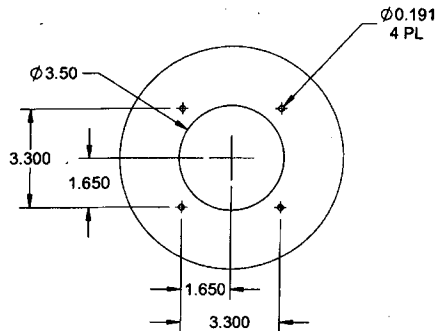
AUXILIARY VIEW R-R
SECTION R-R' OPPOSITE
 SCALE 2X



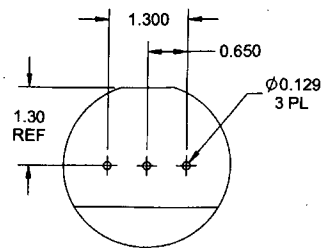
AUXILIARY VIEW S-S
SECTION S-S' OPPOSITE
 SCALE 2X

RELEASED
 2014-07-22

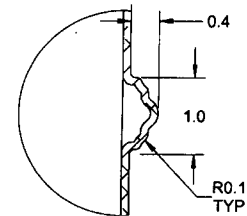
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DRAWN	RF		
CHECKED	PC	DRAWING NO.	REV. E
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DE APPR.	PC	OUTBOARD CEILING PANELS NTS	
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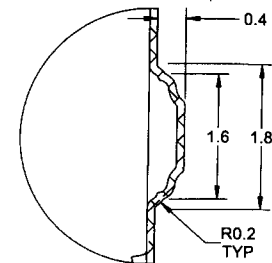
DETAIL D
SCALE 2X
B4-13
B3-14
B5-15
B5-16



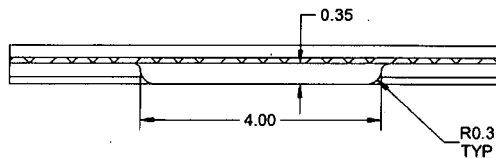
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C7-13
B6-14
C6-15
B5-16



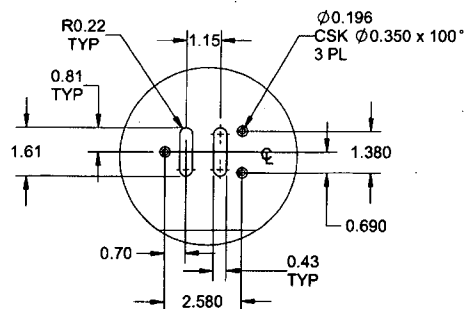
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SCALE 1.5X
B2-17
B4-17
C5-17
C7-17



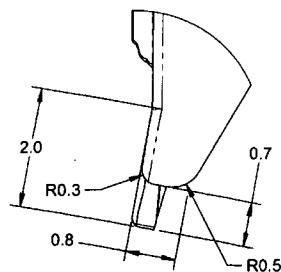
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C2-17
C3-17
C5-17
C7-17



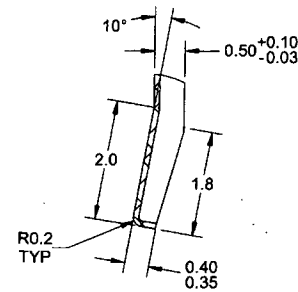
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SCALE 4X
B5-16



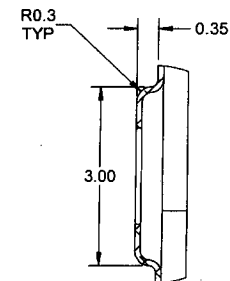
DETAIL Q
SCALE 2X
C5-16



DETAIL N
SCALE 2X
B2-13



DETAIL O
SCALE 2X
D2-17
D3-17
B5-17



DETAIL P
SCALE 4X
C2-17

RELEASED
2014-01-22

DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	PC	DRAWING NO.	REV. E
MFG. APPR.	PC	D4635	SHEET 18 OF 18
APPROVED	PC	TITLE	SCALE
DE APPR.	PC	OUTBOARD CEILING PANELS	NTS
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